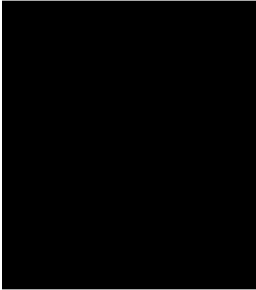




DEPARTMENT OF SCIENTIFIC LABORATORIES

William B. Ross, CAPT, MC, USN
Chairperson
Date of Appointment - March 1995



(D) Keith M. Mikoff, MSgt, USAF
Superintendent
Date of Appointment - July 1995

MISSION

The mission of the Department of Scientific Laboratories is to provide technical, consultative, and scientific services to the departments of the Armed Forces Institute of Pathology, ultimately supporting the Institute's mission of consultation, education, and research. Services include basic and advanced histologic techniques, scanning and transmission electron microscopy, and immunohistochemical tissue analyses. The department provides basic and advanced training in histology techniques to military and civilian personnel through the Tri-Service Histology Technician Training School and the Annual Histopathology Techniques Seminar, respectively. The department performs original research in the effects of oxygen on biological systems at high and low atmospheric pressures, the understanding of which will support the military's combat casualty care mission. All efforts are designed to ensure the highest medical and investigative science.

ORGANIZATION

The Department of Scientific Laboratories was organized in December 1988. After reorganization adjustments in 1991 and 1994, the department now consists of an administrative section and the following five components:

- Division of Altitude and Hyperbaric Physiology
- Histopathology Laboratories
- Tri-Service School of Histotechnology
- Electron Microscopy (SEM,TEM) Laboratories
- Division of Immunohistochemistry

STAFF

Professional / Scientific

- (D) James C. Durham, COL, MC, USA, Chairperson
- (A) William B. Ross, CAPT, MC, USN, Chairperson

Administrative / Technical

- Arnicia E. Downing, Senior Laboratory Supervisor
- (D) Cynthia D. Cousins, HM1, USN, Superintendent
- Loraine H. Anderson, Maj, USAF, BSC, Chief, Altitude and Hyperbaric Physiology
- (D) Keith M. Mikoff, MSgt, USAF, Superintendent, Tri-Service School of Histotechnology
- Efrain Perez-Rosario, Chief, Electron Microscopy Laboratories

(D) Ronald Turnicky, LTC, USA, Chief, Immunology Division
Kathy R. Green, Secretary
Debbie L. Robertson, Program Support Assistant

GOALS

Consultation

Provide scientific guidance and administrative assistance to component elements to facilitate minimum specimen turnaround time (24 to 48 hr), maintaining a superior product.

Maintain open and interactive relationships with department chairpersons to gain a clear understanding of department missions in order to best provide timely technical and scientific services specific to the needs of each department's consultative mission.

Education

Provide scientific guidance and administrative assistance to component divisions to facilitate the presentation and quality of their respective academic courses. Place emphasis and support for increased attendance, sponsorship, and offering of off-site courses.

Continue to provide the highest quality training in histotechnology by the Tri-Service School of Histotechnology by recruitment of interdivisional Department of Scientific Laboratories' faculty staff and interdepartmental Armed Forces Institute of Pathology faculty staff appointments.

Support the recruitment and selection of civilian and military students to maintain a maximum student body and an appropriate military and civilian mix.

Provide technical and developmental assistance, illustrative productions, and scientific verbiage in support of AFIP production of an interactive CD-ROM for Basic and Advanced Laboratory Methods in Histotechnology and Immunohistochemistry.

Research

Provide scientific guidance and administrative assistance to component elements and Institute departments to facilitate the support of research protocols and presentation and publication of the same.

Ensure the equitable distribution of departmental services and resources to Institute investigators.

Administration

Implement the CAP computerized workload recording system for the electron microscopy and neuromuscular laboratories.

Continue the laboratory renovation program.

Continue to implement continuous quality improvement.




DIVISION OF ALTITUDE & HYPERBARIC PHYSIOLOGY

Lorraine H. Anderson, Lt Col (S), USAF, BSC
Chief
Date of Appointment - 12 March 1993

MISSION

The division's mission is to enhance the scientific understanding of the effects of the aerospace and hyperbaric environments on biological systems and scientific hardware. The research, consultation, and education elements of the mission are defined as follows:

- a. Research: To study the effects of aerospace and hyperbaric environments on cells in culture, animals, humans, and scientific hardware. To report results that (1) provide a basic scientific foundation for applications of clinical hyperbaric oxygen therapy and use this information to support treatment of service members with battlefield injuries and (2) provide basic scientific information on the effects of the aerospace environment on biological systems and use this information to directly support the flight crew in the operational aerospace environment.
- b. Consultation: To function as an academic resource for information on the basic science of altitude and hyperbaric physiology; to provide an evaluative assessment of case referrals in order to further the scientific understanding of a specific physiological phenomenon of interest to the hyperbaric and aerospace community.
- c. Education: To establish a series of lectures and courses on current issues in hyperbaric and aerospace medicine. The courses, sponsored by the AFIP and the Registry of Hyperbaric Physiology and Pathology, possibly in conjunction with another academic organization, are for presentation to the civilian and military academic communities.

STAFF

Professional / Scientific

Lorraine H. Anderson, LtCol (S), USAF, BSC
David A. Kulesh, Maj (S), USAF, BSC
Camala C. Cline, Capt, USAF, BSC

Administrative / Technical

(A) Rodney Herring, TSgt, USAF
(D) Rodney J. Miller, TSgt, USAF
Bernard Wilson, SSgt, USAF
David Vargas, SSgt, USAF
(A) Michelle Garcia, A1C, USAF

RESEARCH

Wound Healing/Tissue Repair: Research efforts in our tissue culture laboratory focused on experiments with cells in culture and small animals that were conducted using specialized environmental boxes and pressure chambers. Specific studies included those on basic mechanisms of wound healing and oxygen toxicity.

Two division research protocols funded by the Air Force Office of Scientific Research are:

“Alteration of Macrophage Chemotactic Response by Oxygen.” The purpose of this study is to determine if oxygen can influence macrophage migration, either directly or indirectly. Data collection has been completed, and a manuscript is being finalized.

“Oxygen Tension Effects on Wound Healing Molecular Mechanisms.” The purpose of this study is to determine if oxygen can influence gene regulation as related to cell proliferation.

One division research protocol funded by AFIP/ARP is:

“Dose-Response Relationship for Radiation Treatment Effect in Hindlimb Soft Tissue Using the Mouse as a Model System.” The purpose of this study is to develop a soft tissue radionecrosis model to be utilized for investigating the role that hyperbaric medicine may play in the healing process of this type of chronic wound.

Aerospace Research: The division is collaborating with the Walter Reed Army Institute of Research and NASA on a project entitled “Molecular and Cellular Analysis of Space-Flown Myoblasts,” which studies the alteration of musculoskeletal cells when exposed to a microgravity environment. This is a portion of a continuing project for the study of space flight-induced pathological changes in muscle. Experiments in 1995 were aboard STS-63. Experiments are scheduled for the space shuttle flight in May 1996.

Chamber Research: The division is collaborating with the Industrial Hygiene Section at WRAMC in a protocol entitled “Noise Decibel Level Evaluation Inside the AFIP Hyperbaric Chamber.” This study seeks to determine if the inside of the hyperbaric chamber is a hazardous noise environment during a dive. It will also identify if current test instruments are able to safely and effectively operate in a pressurized environment.

EDUCATION

The division directs a scientific research internship for US Navy midshipmen and ensigns from the US Naval Academy and medical students from the Uniformed Services University of the Health Sciences to work in our laboratory during the summer months. This experience exposes the young officers to a professional laboratory research setting.

COMMITTEE MEMBERSHIP

The division took part in the following activities:

- Air Force Advisory Committee
- Biosafety Committee
- Change of Command Committee
- Health Promotion Council
- Human Use Committee
- Joint Advisor Committee on Clinical Hyperbaric Medicine
- Junior Enlisted Council
- Laboratory Animal Care and Use Committee
- Safety Committee

GOALS

Continue to conduct, present, and publish research following the guidance provided by hyperbaric oxygen research strategy.

Explore expansion of hyperbaric research constraints.

Develop new experimental protocol to submit for FY96 and FY97 funding.

Continue to establish collaborative investigations with investigators outside of the AFIP.

Continue and expand consultative relations with academic and military organizations

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Presentations were given at the annual meetings of the Undersea and Hyperbaric Medical Society, the American Society for Gravitational and Space Biology, and the American Institute of Aeronautics and Astronautics.

Abstracts

1. Anderson LH, Gibellato MG, Wilson B, Kulesh DA. Immunofluorescent staining patterns of spaceflown (STS-45 & STS-63) non-fusing L8 myoblast variant cells. *American Society for Gravitational and Space Biology*. 1995;9:62. Abstract 109.
2. Anderson LH. Effects of oxygen tension on macrophage migration. *Undersea Hyperb Med*. 1995;22(suppl):48. Abstract 71.

In addition, one journal article is in press.

1. *Journal of the American Medical Association*, 2000; 283: 2689-2693.

Arnicia E. Downing
Senior Laboratory Supervisor
Date of Appointment - 23 September 1991

The mission of the Histopathology Laboratories is to provide histotechnical support and expertise to the pathology departments at the AFIP and to provide training in histotechniques to visiting professionals and technologists.

To insure that the laboratories are capable of fully meeting their mission, the staff from the College of American Pathologists are invited to inspect every aspect of the laboratories' operation. The most recent inspection of the laboratories resulted in no discrepancies.

(D) Gayle G. Andre, Branch Chief
Melba Ashby, Histopathology Technician
Betty Beal, Histopathology Technician
Mildred Benton, Histopathology Technician
Shirley V. Bland, Branch Chief
Carl Brown, HM2, USN, Histopathology Technician
(A) Bernie Cabiles, SSgt, USAF, Histopathology Technician
Mel B. Castro, Histopathology Technician

- (A) Michael Cooper, TSgt, USAF, Histopathology Technician
Scott Denk, A1C, USAF, Histopathology Technician
- (A) Karen Dunlap, Histopathology Technician
Peter V. Emanuele, Branch Chief
David Eveland, A1C, USAF, Histopathology Technician
- (A) Kristopher Fidler, Histopathology Technician
Myra Grant, Histopathology Technician
Zehaitu Harvey, Histopathology Technician
- (A) James Hughes, HM2, USN, Histopathology Technician
- (D) Shianne Huston, SrA, USAF, Histopathology Technician
- (D) Merrill Jackson, Histopathology Technician
- (A) Anissa Johnson, SSG, USA, Histopathology Technician
Ingrid Jones, Histopathology Technician
- (D) Yvonne Jones, SPC, USA, Histopathology Technician
Florence D. Kaplan, Branch Chief
Clementine Kelson, Histopathology Technician
Altermese Kendrick, SPC, USA, Histopathology Technician
Michelle Lewandowski, SrA, USAF, Histopathology Technician
- (D) Joseph N. Madary, TSGT, USAF, Laboratory NCOIC
Debra A. McElroy, Branch Chief
Warren W. McNeil, Histopathology Technician
- (D) Darryl Mitchell, Histopathology Technician
Alejandro, Morales, HM3, USN, Histopathology Technician
Barbara J. Norfleet, Histopathology Technician
- (A) Melmar Ordinario, SSgt, USAF, Histopathology Technician
- (D) Rodney Osborn, HM2, USN, Laboratory LPO Evening Shift
- (A) Caroline Patrick, HM2, USN, Laboratory LPO Day Shift
Verna Pinkett, HM2, USN, Histopathology Technician
Michael Proctor, Histopathology Technician
Michael Repkin, SPC, USA, Histopathology Technician
- (D) Jennifer Sampson, HM3, USN, Histopathology Technician
Altery Sherman, SrA, USAF, Histopathology Technician
Blair Slaughter, Histopathology Technician
Ellen S. Slaughter, Histopathology Technician
Blondell J. Smith, Histopathology Technician
- (A) Paul Smith, SSG, USA, Histopathology Technician
Stephanieanne Walsh, A1C, USAF, Histopathology Technician
Jack B. Wenger, Branch Chief
Julia Wilson, Branch Chief
Robert Wilson, Histopathology Technician

CONSULTATION

The administrative staff provided the management and technical supervision of the laboratories, which consist of five specialized and two general histology laboratories. The laboratories are organized to allow for a “STAT” laboratory to handle consultative cases and a “Research and Education Laboratory” to provide services for projects requiring that type of support. As a result, turnaround time has been significantly reduced, while continuing support from the specialty laboratories has been rendered as required. Workload is also more equitably distributed throughout the laboratories. A total of 30,577 cases were completed.

WORKLOAD COMPLETED - 1995

Cases received	34,275
Cases completed	34,120
Total blocks cut	69,439

Total H&Es stained	143,728
Total special stains	72,778
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Total stained slides	225,832
Total regular unstained	56,281
Total "glue" unstained	189,173
Total slides repaired	510
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Total slides prepared	474,480
Specimens x-rayed	1,278

EDUCATION

The laboratories prepared thousands of microslides for the Institute's pathologists in support of the AFIP education mission. These slides consisted mainly of teaching sets and study sets to be used at various professional meetings.

The managerial and technical staff presented a 3-day Histopathology Techniques Seminar in August. The seminar consisted of 24 hours of lectures. It was attended by 62 persons.

The staff presented 40 didactic hours to the participants in the January and July Tri-Service School of Histotechnology courses.

Visiting pathologists and technologists received over 160 hours of on-site training in a variety of laboratory techniques, including eye histotechnology, special staining methods for infectious organisms, and Warthin-Starry procedures for melanin and bacteria.

Articles that addressed modifications to histopathology laboratory procedures were submitted for publication in all editions of the AFIP Letter.

Orientation and advanced training was provided to 8 civilians and 30 military incoming personnel.

Several histologists lectured at state and regional histotechnologist society meetings.

RESEARCH

Cost estimates for pathology departments' research projects are now prepared based on College of American Pathologists workload units and unit costs, which include technician time, materials, and equipment. The department provided technical support for all approved research projects. A research project entitled "Evaluation of Clearing and Infiltrating Mixtures (CIM) as Xylene Substitutes for Tissue Processing" has been completed and was accepted for publication by the *Journal of Histotechnology*.

OTHER ACTIVITIES

Various technical equipment corporations were invited to demonstrate items that have significantly advanced the approach to histology microslide production to include robotic stainers and coverslippers, improved warming tables, cryostats, etc. All items were evaluated by department staff and were available for inspection and trial by other departments in the Institute.

The members of the histology laboratories also participated in the following Institute projects:

Task Force for Consultation

PADAMIS Committee

Quality Assurance Committee
Junior Enlisted Council
Top Three Association
Ash Lecture
AFIP Annual Picnic
Combined Federal Campaign
Editorial Committee, AFIP PATHWAYS
Health Promotion Council
Intramural Bowling/Softball/Basketball Leagues
Histopathology Occupational Survey
Career Day Program at Area High Schools

GOALS

Consultation

Continue to provide microslides of excellent diagnostic quality from cases that meet agreed-upon restrictions within established turnaround times.

Expand services to assist in the Tri-Care.

Maintain and improve the turnaround time for 97% of cases to 24 to 48 hours.

Continue to pursue methods that eliminate duplication of tasks and conserve resources.

Education

Continue to prepare study sets of superior quality.

Expand the current continuing education program to include outside speakers on various topics.

Involve more technicians in the annual Histopathology Seminar.

Invite more guest lecturers and vendors to participate in the annual seminar.

Present the Histology Course statewide and internationally.

Research

In addition to preparing microslides for consultation and education, continue to devote laboratory manpower, equipment, and materials to provide technical support for Institute research efforts.

Research and develop new methodologies that are safer and will reduce case turnaround time.

Continue work on the research project entitled "Evaluation of Clearing and Infiltrating Mixtures (CIM) as Xylene Substitutes for Tissue Processing."

Assist with the evaluation of distilled xylene in line with the minimization of hazardous wastes.



TRI-SERVICE SCHOOL OF HISTOTECHNOLOGY

Cynthia D. Cousins, HM1, USN
Course Superintendent
Date of Appointment - 1 June 1995

MISSION

The mission of the Tri-Service School of Histotechnology is to provide formal training to military and civilian students in the technical operations of anatomic pathology as applied to the histopathology laboratory and postmortem procedures. At present, the course is 100 training days in length, convenes twice a year, and includes instruction in the theory and application of histotechnology, practical training in processing, cutting and staining tissue specimens, and assisting during postmortem examinations. Graduates are awarded certificates and, for the Air Force and Navy, respectively, AFSC 4T032 and NEC 8503 classification codes. Course content is coordinated through the School of Health Care Sciences, Sheppard AFB, Texas, and is implemented with support from the Anatomic Pathology Department, Walter Reed Army Medical Center and the histopathology laboratories of the Armed Forces Institute of Pathology. Application for accreditation has been made to the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), and the course is in the process of being expanded to 180 training days to meet NAACLS requirements. Accreditation would mean our graduates would be eligible to apply for certification as histologic technicians through the American Society of Clinical Pathologists, HT(ASCP), immediately after graduation.

Number of Students Trained in 1995:

Civilians	7
Army	0
Navy	5
Air Force	25

STAFF

- (A) Cynthia D. Cousins, HM1, USN, BS, HTL(ASCP), Course Superintendent
- (A) Charles A. Lattany, III, SSgt, USAF, Assistant Superintendent
Thomas R. Pierce, HM2, USN, LPOIC
- (D) Lucille M. King, HT(ASCP), Course Instructor

GOALS

- Education**
- Proceed to the next stage of the NAACLS accreditation procedure.
 - Revise course chart, plan of instruction, lesson plans, and other instructional material to reflect expanded program.
 - Pursue new instructional texts for student training.



ELECTRON MICROSCOPY LABORATORIES

Efrain Perez-Rosario
Chief
Date of Appointment - August 1991

MISSION

To provide technical and scientific services to the departments of the Armed Forces Institute of Pathology, supporting the professional staff in consultation, research, and education using advance technology in transmission electron microscopy (TEM), scanning electron microscopy (SEM), and scanning transmission microscopy (STEM). With the addition of the Neuromuscle Laboratory, we are also able to provide scientific and technical services to the Division of Neuromuscular Pathology, using histochemistry STEM for histotechnical analysis of such specimens.

STAFF

- (D) Joseph N. Madary, TSgt, USAF, Laboratory NCOIC
Thomas C. Allen, Histopathology Technician
Carole E. Gregory, Neuromycologist-DNA
Francine R. Hincherrick, Research Biologist
Joseph L. Rosamont, Histologist
- (D) Loutishia T. Templeman, Histopathology Technician
Ives J. Valenzuela, Research Neuromycologist-DNA

WORKLOAD COMPLETED - 1995

Transmission Electron Microscopy	
Cases received	506
Cases Completed	506
Total Blocks Cut	3000
Total Grids Cut	2,505
Total Pre and Post Slides Cut	3,000
Total Film Developed	663 rolls
Total Prints Made	1,326
Analytical Electron Microscopy (SEM)	
Cases Received	120
Cases Completed	120
Critical Point-Drying Specimens	20
Sputter-Coated Specimens	110
Carbon-Coated Specimens	110
X-ray Spectra Specimens	110
X-ray Mapping Specimens	110
Film Developed	125
Total Prints	480



NEUROMUSCLE LABORATORY	
Cases Received	508
Cases Completed	508
Total Blocks Cut	1,116
Total Grids Cut	120
Frozen Specimens, Glut. & Form.	488 cases
Histochemistry Slides	4,610
Total Pre and Post Slides Cut for E.M.	1,116
Total Film Developed	11
Total Prints Made	165
Total Cases Received	1,014
Total Cases Completed	1,502
Total Blocks Cut	7,550
Total Slides Cut	7,550

In addition to the two high-resolution (Zeiss-10A) electron microscopes and the scanning transmission electron microscope with an X-ray analyzer, the Electron Microscopy Laboratories also have a new scanning electron microscope (Zeiss DSM 960A) with energy dispersive X-ray analyzer.

The Neuromuscle Laboratory provides histochemical analysis of samples to include frozen sections and electron microscopy and muscle typing.

GOALS

- Consultation**
- Enhance and utilize new technology in transmission electron microscopy.
 - Evaluate state-of-the-art equipment that will enhance the application and diagnostic evaluation of consultative cases.
 - Acquire a new scanning electron microscope with new add-on technology.
- Education**
- Continue to cross train TEM technicians in the use of analytical scanning microscopy methods and facilities.
 - Continue to present lectures in TEM and AEM to the AFIP staff and other personnel.
 - Continue to build a reference library for the TEM laboratories.
- Research**
- Continue to assist members of the Department of Infectious and Parasitic Disease Pathology in their current research on AIDS-related projects.
 - Continue to assist investigators of the Altitude and Hyperbaric Physiology Division with their current studies in cell fibers fixation.





IMMUNOPATHOLOGY DIVISION

Ronald P. Turnicky, LTC (P), MC
Chief
Date of Appointment - 1 June 1994

Gary Bratthauer
Senior Technical and Research Associate

MISSION

The mission of the Immunopathology Division is to provide state- of-the-art immunohistochemical staining in support of diagnostic and prognostic markers in case consultation and Institute research. Our secondary mission is the development of advanced tissue diagnostic techniques.

STAFF

Professional/Scientific

Ronald P. Turnicky, LTC (P), MC
Gary Bratthauer

Administrative/Technical

- (A) Lila Adams, ARP, Histopathology Technician
- (A) Robert Eisenhower, HM2, USN, Histopathology Technician
- (A) Yvonne Jones, ARP, Histopathology Technician
- (A) Wanda King, HM1, USN, Histopathology Technician
- (A) Eric Ogujuba, HM3, USN, Histopathology Technician
- (A) Gregory Shepard, SPC, USA, Histopathology Technician
- (A) Stacy Tamer, SGT, USA, Histopathology Technician
- (A) Isabella Triana, ARP, Histopathology Technician
- (A) Joseph Madary, TSgt, USAF, Histopathology Technician
- (A) Gayle Andre, Branch Chief

CONSULTATION

WORKLOAD COMPLETED - 1995	
Diagnostic Cases	71,516
Research Cases	4,394
Quality Control Cases	11,708

EDUCATION

Technical staff taught two 3-day wet workshops on immunohistochemistry to the Tri-Service School of Histotechnology.

Gave lectures in support of the Tri-Service School of Histotechnology’s Histology Seminar and Hematologic Pathology Course.

Gave a lecture at the Weekly Professional Staff Conference.

Provided instruction in testing methodologies to outside laboratories and provided numerous interpretive consultations to AFIP Pathologists.

Continuing education conducted for division staff.

RESEARCH

Improved immunohistochemical technologies were evaluated to include the Envision immunohistochemistry (IHC) system, standardization of antigen-enhancement procedures, and reagent variation in standard assay enhancing target antigen sensitivity. Efforts resulted in modification of the standard assay currently used in diagnostic testing. Additional variations to the assay resulted in improved performance in aspiration cytology and IHC in tissue culture.

Eight new antibodies were worked up and added to the diagnostic menu, including bcl-2, monoclonal thyroglobulin, monoclonal calcitonin, androgen receptor, inhibin, and epidermal growth factor receptor. Continued evolution towards monoclonal progresses with monoclonal kappa/lambda. Work in progress will include the availability of cytokeratin 7, cytokeratin 20, CD31, CD1a, myo D for rhabdomyosarcoma, CD8, and markers for EBV in the first quarter of 1996. Other research-only assays were completed on transforming growth factor Beta, osteocalcin, osteonectin, and pulmonary markers for proSPB and TTF-1. Thirteen research protocols were also supported within the year utilizing standard assays currently on-line.

Immunohistochemical panels were refined via manual methodology and subsequently applied to automated procedures in support of two large breast carcinoma studies for the Departments of Cellular Pathology and Gynecologic and Breast Pathology. The breast carcinoma panel for prognostic markers includes ER/PR, c-erb-B2, Ki-67, PCNA and p53. The two projects have absorbed significant technical resources and will total 8,600 slides by project completion.

Automated immunocytochemical assays are under evaluation for cost-effectiveness, labor savings, and enhanced antigen detection. Automated capabilities to perform both diagnostic and research studies using in situ hybridization exist with the acquisition of the Ventana Gen2 system.

In situ hybridization was conducted by the technical staff on two diagnostic cases for the detection of human JV virus.

GOALS

Our objective is the development of diagnostic capabilities within the Institute, while providing prognostic information relating to patient care. We plan to achieve this by:

Refined methodologies for antigen detection, automation, and more sensitive detection methodologies.

Utilization of both molecular and immunologic techniques for cellular proliferation, cell signaling, oncogene and suppressor gene products, and adhesion molecules.

Bringing on-line an expanded antibody menu performed in frozen tissue and nontraditional fixatives.

We plan to improve the data base of immunohistochemistry staining patterns of most tumors. This computer service will be available to all AFIP staff members.

PUBLICATIONS

1. Marsella R, Buckner S, Bratthauer G, O'Connor D, Proctor J, O'Leary T. Identification of genital herpes simplex virus infection by immunoperoxidase staining. *Applied Immunohistochemistry*. 1995;3:184-189.
2. Siedman J, Abbondanzo S, Bratthauer G. Lipid cell (steroid cell) tumor of the ovary: immunophenotype with analysis of potential pitfall due to endogenous biotin-like activity. *Int J*

- Gynecol Pathol*. 1995;14:331-338.
3. Carr NJ, Warren A, Taubenberger J, Lichy J, Bratthauer G, Sobin L. Multiple squamous cell papillomas of the human esophagus unassociated with detectable human papillomavirus. *J Pathol*. 1995;176:53A. Abstract.
 4. Burke A, Anderson D, Benson W, Turnicky R. Localization of human immunodeficiency virus 1 RNA in thymic tissues from asymptomatic drug addicts. *Arch Pathol Lab Med*. 1995;119:36-41.
 5. Mapou R, Turnicky R, Temoshok L. Relation among cerebrospinal fluid HIV-1 culture, quinolinic acid, and reaction time in HIV Infected individuals. *Journal of Neurology, Neurosurgery, and Behavioral Neurology*; 1995.